

CHAPTER 8:

PARKING AND INFRASTRUCTURE

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Section 8.1 Parking General Provisions

The purpose of this section is to ensure that adequate and well-designed parking is provided for developments in the Town of China Grove. The following are general requirements for all new developments except single-family detached residential and two-family attached residential (duplexes). The expansion of existing development shall follow these requirements to the greatest extent possible.

- A. Except in the Highway Business, Light Industrial, and Heavy Industrial districts, off-street parking areas shall be located to the side or rear of buildings. Off-street parking areas in the side yards shall not extend beyond the frontage line of the building. Off-street parking areas in the Highway Business district may be located in the front yard. However, the parking should not be prominent and should be screened from view with buildings and landscaping wherever possible.
- B. All side and rear yard off-street parking areas shall be screened from view in accordance with Type B landscaping in accordance with Chapter 7.

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- C. Off-street parking areas shall be designed to facilitate adequate movement and access by sanitation, emergency, and other public service vehicles.
- D. Off-street parking areas shall be designed so that parked vehicles do not encroach upon, extend onto, or cause vehicles to back into public rights-of-way, sidewalks or strike against or damage any wall, vegetation, utility, or other structure.
- E. Off-street parking areas of greater than five (5) spaces may be required to provide curb and gutter in accordance with Stormwater Manual as referenced in Section 8.11.6.
- F. The size of any single surface parking lot shall be limited to three (3) acres, unless divided by a street or building. Larger parking lots shall be separated by buildings or landscaped areas.
- G. The following shall be paved or contain a similar type material approved by the Zoning Administrator. Gravel and other stabilization material without a permanent wearing surface is not permitted:
 - Front yard parking areas.
 - Side yard parking areas.
 - All off-street parking areas for lots of greater than one acre. Driveways
 - Off-street rear yard parking areas for lots of less than one acre may use pea gravel in lieu of a paving material provided that handicap parking meets ADA standards and pea gravel is contained to the parking area using landscaping timbers or other containment device.
- H. Paved parking areas shall have lines demarcating each parking space.
- I. Off-street parking areas shall be properly maintained in all respects. In particular, and without limiting the foregoing, off-street parking area surfaces shall be kept in good condition (free from potholes, etc.) and parking space lines or markings shall be kept clearly visible and distinct.
- J. On-street parking may be used to satisfy parking requirements on streets.
- K. A secure bicycle rack is required for all parking lots greater than 50 spaces. Bicycle parking may be placed in the front yard.

Section 8.2 Parking Ratios

8.2.1 Parking Ratios by Use

- A. The following are minimum parking ratios for the uses indicated:

Use	Minimum
Single-Family & Two-Family Residential (Attached & Detached)	2 per dwelling unit
Multi-Family Residential	1 per bedroom

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Residential Care Facilities & Hospitals	1 per 4 beds
Commercial (Office & Retail)	1 per 300 square feet gross floor area
Restaurants	1 per 4 seats
Warehousing/Industrial	.25 per 1000 square feet gross floor area
Mixed Use	Use minimums for Commercial and Multi-Family Residential
Hotel/Motel/Inn	1 per room
Civic & Public Assembly Uses (not including schools)	1 per 6 seats
Elementary and Middle Schools*	1.5 per classroom
High Schools* and Colleges	10 spaces per classroom
Other	Minimum of most similar use as determined by the Zoning Administrator

*Public schools shall meet the parking standards set forth by the Rowan-Salisbury School System.

- B. The Zoning Administrator may reduce the minimum number of parking spaces required by up to 10 percent if the applicant can demonstrate that the number of required parking spaces is excessive due to use or property constraints.

8.2.2 Parking Spaces for the Disabled

- A. Except for a lot containing a duplex or single-family dwelling, all uses shall be required to provide the following number of spaces designed for disabled persons:

Total Number of Required Spaces	Minimum Disabled Spaces
1-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6

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201-300	7
301-400	8
401-500	9
501-1,000	2% of total
1,001 +	20+1 for each 100 over 1,000

- B. The number of such spaces shall be in addition to those required by the minimum parking ratios.
- C. A minimum of one (1) parking space for the disabled shall be van accessible. For every eight (8) spaces for the disabled, there shall be at least one van accessible space.
- D. Off-street parking spaces for the disabled shall be designed as follows:
- All spaces for the disabled shall have access to a curb-ramp or curb-cut when necessary to allow access to the building served, and shall be located so that users will not be compelled to wheel behind parked vehicles, and shall be located the shortest possible distance between the parking area and the entrance to the principal building it serves.
 - Parallel parking spaces for the disabled shall be located either at the beginning or end of a block or adjacent to alley entrances. Curbs adjacent to such spaces shall be of a height which will not interfere with the opening and closing of motor vehicle doors.
 - Each parking space for the disabled shall be paved and prominently outlined with paint, with a permanent sign of a color and design approved by the North Carolina Department of Transportation, bearing the internationally accepted wheelchair symbol, posted at the head of the parking space.
 - The size of the parking space shall be per building code specifications.

Section 8.3 Shared Parking and Parking Connectivity

8.3.1 Shared Parking

The joint use of shared off-street parking between two uses may be made by contract by two or more adjacent property owners. Developments that operate at different times may jointly use or share the same parking spaces with a maximum of one-half (1/2) of the parking spaces credited to both uses if one use is a church, theater, assembly hall or other use whose peak hours of attendance will be at night or on Sundays, and the other use will be closed at night or on Sundays.

8.3.2 Parking Connectivity

Adjacent parking lots shall be interconnected except in the case of existing steep topography between the sites. Each parking area that is interconnected may reduce their minimum parking requirement by five (5) percent.

Section 8.4 Parking Dimensions

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8.4.1 Parking Space Dimensions

Each parking space, (other than those designed for the disabled) shall contain a rectangular area at least 19 feet long and nine (9) feet wide.

8.4.2 Parking Lot Dimensions

The following are dimensional standards for all required parking areas:

	Angle of Parking Spaces				
Aisle Direction	0 (parallel)	30	45	60	90 (perpendicular)
One-Way	13 feet wide	14 feet wide	18 feet wide	20 feet wide	24 feet wide
Two-Way	19 feet wide	20 feet wide	21 feet wide	23 feet wide	24 feet wide

Section 8.5 Loading Area Requirements

All non-residential uses greater than 5,000 square feet (except civic uses) shall provide an off-street loading area. The C-B District is exempt from off-street loading requirements.

8.5.1 Minimum Off-Street Loading Space Requirements

The following minimum loading space requirements shall apply for the appropriate use:

Use	Required Loading Spaces
Retail	1 space per 20,000 square feet
Wholesale/Industrial	1 space per 20,000 square feet
Office/Institutional	1 space per 50,000 square feet

8.5.2 Design of Loading Spaces

- A. Off-street loading spaces shall be designed and constructed so that all maneuvering to park vehicles for loading and unloading can take place entirely within the property lines of the premises. Loading spaces must be designed so as to not interfere with the normal movement of vehicles and pedestrians on public rights-of-way. Off-street loading spaces shall be located in the rear yard. No area allocated to loading and unloading facilities may be used to satisfy the area requirements for off-street parking, nor shall any portion of any off-street parking area be used to satisfy the area requirements for loading and unloading facilities.
- B. Each loading space shall have a paved surface and be a minimum of 12 feet in width and 40 feet in length. Each such berth shall also have a minimum vertical clearance of 14 feet.
- C. Use of alternate design plans, or construction techniques may be used when unreasonable or impractical situations would result from the application of Loading Area Requirements. Such situations may result from unique site conditions, innovative design applications, and/or unified development design.
- D. The performance of alternate design standards shall be evaluated by the Technical Review Committee to determine if the alternate design meets the intent and purpose of this ordinance. This determination shall

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take into account the land use of adjacent property, the orientation of the building to public streets, the intended use of the structure, attention to architectural detail, scale, and mass.

E. Appeal Decisions of the TRC regarding alternate methods of compliance may be appealed to the Board of Adjustment in accordance with Chapter 16.

Section 8.6 Driveways

These driveway requirements do not apply to single family detached and two-family attached residential uses.

- A. Driveways shall be not less than 10 feet in width for one-way traffic and 18 feet in width for two-way traffic.
 - B. Twelve (12) foot wide driveways are permissible for two way traffic when:
 - The driveway is not longer than 50 feet; and
 - The driveway provides access to not more than six parking spaces; and
 - Sufficient turning space and stacking area is provided so that vehicles need not back into a public street.
- C. In no case shall a driveway width exceed 36 feet, except as required by NCDOT.
- D. No surface parking or circulation driveway is permitted within any required or established setback, except that driveways providing access to the parking area may be installed across these areas.
- E. Driveways shall be as nearly perpendicular to the street right-of-way as possible.
- F. Driveways shall line up with other driveways across the street and be shared between adjacent uses wherever possible.
- G. No driveway on US Highway 29 or Highway 152 shall be less than 300 ft from an existing driveway, unless a shared driveway arrangement is not feasible, or other similar hardships as determined by the TRC.

Section 8.7 Lighting

8.7.1 Applicability

The provisions of this Section shall apply to the installation of all outdoor lighting within the jurisdiction of this ordinance except that the following shall be exempt from this Section.

- A. Outdoor lighting installed for governmental purposes by local, state or federal governmental units and their agents.
- B. Outdoor lighting required to be installed by laws or regulations of a local, state or federal governmental units.

- C. Outdoor lighting installed for one and two-family dwellings.
- D. Lighting associated with temporary events such as holidays and which does not violate the basic principles of this Section.
- E. Outdoor lighting associated with a bona fide farm operation as defined by NCGS 153A-340.

8.7.2 Prohibited Outdoor Lighting

The following types of outdoor lighting are prohibited unless exempt by Section 8.7.1 above:

- A. Light fixtures that imitate an official highway or traffic control light or sign.
- B. Light fixtures in the direct line of vision with any traffic control light or sign.
- C. Light fixtures that have a flashing or intermittent pattern of illumination.
- D. Privately owned light fixtures located in the public right-of-way.
- E. Light fixtures that are a source of glare by their design, orientation or intensity.
- F. Searchlights.
- G. Light fixtures that violate any law of the State of North Carolina relative to outdoor lighting.
- H. Structure highlighting.
- I. Unshielded open vertical light fixtures.

8.7.3 Plan Approval Required

Outdoor lighting is subject to approval by the Zoning Administrator and Technical Review Committee (TRC). The lighting plan shall show sufficient information to determine compliance with the standards of this Section. In approving lighting plans the Zoning Administrator and TRC may modify the standards of this Section where the applicant agrees and where equal or better performance would result. In granting modifications, the Zoning Administrator and TRC may require such conditions as will secure, insofar as practicable, the objectives of the requirements modified.

8.7.4 Outdoor Lighting General Provisions

- A. Outdoor lighting fixtures shall be installed in a manner to protect the street and neighboring properties from direct glare or hazardous interference of any kind. Glare or hazardous interference are situations where the sensation produced by luminance within the visual field is sufficiently greater than the luminance to which the eyes are adapted, such as to cause annoyance, discomfort, or loss in visual performance and visibility.

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- B. Outdoor lighting shall be constructed and operated to minimize the spill over of obtrusive light onto property outside the boundaries of the property on which the lighting is sited which could result in annoyance, discomfort or distraction to persons on the other property.
- C. All outdoor lighting fixtures, subject to this section, except for temporary and emergency lighting, that would otherwise cause glare or obtrusive spill over shall be shielded, recessed or otherwise oriented or treated in such a way to prevent glare or obtrusive spill over.
- D. As a general principle, all outdoor lighting shall be beamed downward and away from adjoining property and streets. Upward lighting shall only be permitted as a modification by the Planning Board.
- E. The maximum light level shall not exceed 0.5 maintained footcandles at any property line in a residential district, or on a lot occupied by a dwelling, congregate care or congregate living structure, and shall not exceed 2.0 maintained footcandles at any public street right-of-way.
- F. All flood lights shall be installed such that the fixture shall be aimed down at least 45 degrees from vertical, or the front of the fixture is shielded such that no portion of the light bulb extends below the bottom edge of an external shield. Flood lights and display lights shall be positioned such that any such fixture located within 50 feet of a public street right-of-way is mounted and aimed perpendicular to and away from the right-of-way, with a side-to-side horizontal aiming tolerance not to exceed 15 degrees from perpendicular to the right-of-way.
- G. All flood lamps emitting 1,000 or more lumens shall be aimed at least 60 degrees down from horizontal, or be shielded such that the main beam from the light source is not visible from adjacent properties or the public street right-of-way.
- H. All wall pack fixtures shall be cutoff fixtures.

8.7.5 Lighting Standards for Parking Lots and Outdoor Activity Areas

- A. Other than flood lights and flood lamps, all outdoor area and parking lot lighting fixtures of more than 2,000 lumens shall be cutoff fixtures.
- B. The mounting height of all outdoor lighting shall not exceed 40 feet above finished grade.

8.7.6 Lighting Standards for Vehicular Canopies

Areas under a vehicular canopy shall have a maximum point of horizontal illuminance of 24 maintained footcandles (FC). Areas outside the vehicular canopy shall be regulated by the standards of 8.7.5 above. Lighting under vehicular canopies shall be designed so as not to create glare off-site. Acceptable methods include one or more of the following:

- A. Recessed fixture incorporating a lens cover that is either recessed or flush with the bottom surface (ceiling) of the vehicular canopy.
- B. Light fixture incorporating shields, or shielded by the edge of the vehicular canopy itself, so that light is restrained to five degrees or more below the horizontal plane.
- C. Surface mounted fixture incorporating a flat glass that provides a cutoff fixture or shielded light distribution.

- D. Surface mounted fixture, typically measuring two feet by two feet, with a lens cover that contains at least two (2) percent white fill diffusion material.
- E. Indirect lighting where light is beamed upward and then reflected down from the underside of the vehicular canopy. Such fixtures shall be shielded such that direct illumination is focused exclusively on the underside of the vehicular canopy.
- F. Other methods approved by the Planning Board.

8.7.7 Lighting Standards - Outdoor Sports Field/Outdoor Performance Areas

- A. The mounting height of outdoor sports field and outdoor performance area lighting fixtures shall not exceed 80 feet from finished grade.
- B. All outdoor sports field and outdoor performance area lighting fixtures shall be equipped with a glare control package (louvers, shields, or similar devices). The fixtures must be aimed so that their beams are directed and fall within the primary playing or performance area.
- C. The hours of operation for the lighting system for any game or event shall not exceed one hour after the end of the event.

8.7.8 Lighting Standards for Outdoor Display Areas

Parking lot outdoor areas shall be illuminated in accordance with the requirements for 8.7.5 above. Outdoor display areas shall meet the following standards:

- A. Outdoor display areas shall have a maximum point of illuminance of 24 maintained footcandles (FC).
- B. All light fixtures shall meet the IESNA definition of cutoff fixtures. Forward throw fixtures (type IV light distribution, as defined by the IESNA) are required within 25 feet of any public street right-of-way. Alternatively, directional fixtures (such as flood lights) may be used provided they shall be aimed and shielded in accordance with this Section.
- C. The mounting height of outdoor display area fixtures shall not exceed 40 feet above finished grade.

8.7.9 Lighting Standards for Signs

Sign lighting shall be regulated in accordance with Chapter 11.

8.7.10 Lighting Standards for Buildings and Landscaping

Lighting fixtures shall be selected, located, aimed, and shielded so that direct illumination is focused exclusively on the building façade, plantings, and other intended site features and away from adjoining properties and the public street right-of-way.

8.7.11 Light Measurement Technique

Measurements shall be made at finished grade (ground level), with the light-registering portion of the meter held parallel to the ground pointing up. The meter shall have cosine and color correction and have an accuracy tolerance of no greater than plus or minus five (5) percent. Measurements shall be taken with a light meter that has been calibrated within the year. Light levels are specified, calculated and measured in footcandles (FC). All FC values herein are maintained footcandles.

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8.7.12 Street Lighting Provisions

The Town of China Grove provides street lighting along public streets within the corporate limits. All requests for street lighting installation and removal are to be submitted in writing to the Town Manager. The following are general provisions for street lighting:

- A. The Town of China Grove, as a minimum standard, shall install and maintain street lights in residential sections only at street intersections or terminations, unless the distance between street intersections exceeds 350 feet. China Grove provides street lighting on existing publicly-dedicated streets in accordance with the following schedule:
 - Single Family Residential Areas: 100 Watt High Pressure Sodium (HPS) bulb mounted on 30 foot wood poles, 500 feet on-center
 - Multi-Family, Mixed Use and Commercial Areas: 250 Watt High Pressure Sodium (HPS) bulb mounted on 30 foot wood poles, 300 feet on-center
- B. Consideration should be made to place all lighting at all intersections and other high pedestrian and other high pedestrian use areas.
- C. Lighting should be planned to ensure adequate illumination for safety of both the pedestrian and the automobile.
- D. Where sidewalks exist on one side of the street only, street lighting will be placed on that side to ensure adequate illumination for the pedestrian.
- E. Additional lighting on a street with existing lighting should be similar in style and illumination to the existing lighting.
- F. Citizens requesting lighting not on public street rights-of-way within China Grove will be referred to the appropriate electric utility. The requesting party will be responsible for all costs associated with lighting non-public street rights-of-way or for which the Town has not authorized installation by the appropriate electric utility to install lighting.

8.7.13 Decorative Lighting

- A. Decorative lighting is encouraged in developments in the R-M and N-C districts.
- B. Property owners associations for developments may choose a decorative light option upon obtaining lease agreement for the decorative light installation and maintenance with Duke Power.
- C. Where underground wiring currently exists along thoroughfares and collector streets, the Town of China Grove may provide decorative pole fixtures at the Town's expense, subject to the approval of the Town Council.

8.7.14 Standards for Acceptance of Lighting by Town

- A. The Town of China Grove may choose to take over responsibility for payment of monthly billing of a street light, provided that the street light:
 - Is within Town-owned right-of-way, and
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Is within a street right-of-way accepted for maintenance purposes by the Town of China Grove or the North Carolina Department of Transportation; and

- Meets Town standards, or the petitioner has paid any cost to have the light brought up to Town standards
- B. Takeover billing shall become effective for the billing cycle following the approval of the request. The Town will not reimburse any billing for which the requesting party is responsible for or if the Town has not authorized Duke Power Company, to bill it. This includes any billing between the date of the citizen's request and the date of the changeover of billing. Take-over billing is only applicable for maintenance and electricity billing only. The Town will not accept any take-over billing of decorative lighting fixtures until all premium costs are paid in full.
- C. The Town may accept street lighting that exceeds the Town's standards for spacing and/or illumination subject to approval by the Town Council
- D. Due to their low lighting capability and maintenance requirements, natural gas lights are not eligible for this program.

8.7.15 Removal of Street Lighting

An individual homeowner or neighborhood organization may request removal of a street light provided the overall lighting pattern in the neighborhood is consistent with this Policy. Requests to remove all lighting within a neighborhood shall require the unanimous consent of all property owners within the neighborhood and approval by the Town Council.

Section 8.8 Street Design Standards

8.8.1 Conformance with Thoroughfare Plan

The location and design of streets shall be in conformance with the adopted Metropolitan Planning Organization and China Grove Thoroughfare Plans. Where conditions warrant, right-of-way width and pavement width in excess of the minimum street standards may be required. In any case where any part of a subdivision lies within the corridor of a Thoroughfare shown on a roadway corridor official Map adopted pursuant to NCGS Chapter 136, Article 2E, no subdivision approval shall be granted with respect to the property in the roadway corridor. Provided, however, no subdivision Plat approval shall be delayed by the provision of the Roadway corridor official map procedure for more than three (3) years from the date of its original submittal.

8.8.2 Street Classification

Diagrams depicting each street category and specifications are located in Appendix B of this Ordinance.

- A. **Category 3:** Thoroughfares that connect town and regional centers. Category 3 streets are typically state-maintained roads that have some level limited access to surrounding property and operate at higher speeds.
- B. **Category 2:** Connects neighborhoods to commercial centers. Category 2 streets operate at low to moderate speeds and may have on-street parking.

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C. **Category 1:** Typically provide access to residential areas and connect neighborhoods. Category 1 streets focus on low traffic volume, high accessibility, pedestrian and bicycle safety, and utility infrastructure for neighborhoods.

D. **Alleys:** Privately maintained right-of-way to access the rear of buildings.

8.8.3 Connectivity

A. The planned street layout of a proposed development shall be compatible with and connect to existing or proposed streets.

B. The street network of a new development shall stub to adjacent properties with development potential whenever possible and where topographic conditions allow at the discretion of the Technical Review Committee and the Planning Board. Where a stub abuts a stream, one-half (1/2) the cost of a bridge to cross the stream shall be bonded for five (5) years to allow for connection to future development across the stream. Development across the stream from an existing stub shall incur the one-half (1/2) the cost of the bridge and have responsibility for the construction of the bridge.

C. Cul-de-sacs shall not be used to avoid connection with an existing street, to avoid the extension of a thoroughfare or collector Street, or to avoid connection to adjoining property. Permanent cul-de-sac streets should not exceed 400 feet in length unless necessitated by topography or property accessibility and approved by the Planning Board. Measurement shall be from the point where the centerline of the street intersects with the centerline of a through street to the center of the turnaround of the cul-de-sac.

D. For consideration of a major subdivision, the plan must meet the following street connectivity requirements of the NC Fire Code, Appendix D, Section D107.1:

- Must provide at least two (2) road accesses to a Collector Road (see Category 2 Collector Road specifications B.2.2 Street Design Criteria by Type) for all major subdivisions of 30 or more dwelling units.
- Must provide vehicle access, where public access is possible to all adjacent existing subdivisions.
- Must provide stub streets to the property lines of all adjacent vacant or under-developed property.

8.8.4 Reserve Strips and Half Streets

Reserve strips and non-access easements adjoining street rights-of-way for the purpose of preventing access to or from adjacent property, (except those required to prevent access to Thoroughfares) and halfstreets shall not be permitted under any condition.

8.8.5 Private Streets & Gated Communities

Private streets and gated communities are not permitted within the jurisdiction of China Grove. However, privately maintained alleys that meet the provisions of this Section are permitted.

8.8.6 Intersections

Streets shall be designed so as to intersect as nearly as possible at right angles, and no street shall intersect any other street at an angle of less than 60 degrees. Streets crossing natural areas or streams shall cross at or near to right angles as possible within limits of topographic conditions. Offset intersections are to be avoided. Intersection offsets shall meet the standards set forth in Appendix B.

8.8.7 Marginal Access Streets

Where a tract of land to be subdivided adjoins a Thoroughfare, the developer may be required to provide a marginal access street parallel to the Thoroughfare or provide for through lots on a local street for the lots to be developed adjacent to the Thoroughfare. Where through lots are established, such lots may be prevented from having direct access to the Thoroughfare by driveways through the use of reserve strips or non-access easements.

8.8.8 Utilities, Street Lights and Storm Drainage within Streets

Utilities, street lights, sidewalks, storm drainage and other such facilities to be placed within the street right-of-way shall be placed in accordance with Town standards as shown in Appendix B. All utilities shall be placed underground.

8.8.9 Pavement, Curb and Gutter and Pavement Side Ditch

Pavement, curb and gutter to be placed in public streets shall be placed in accordance with Town Standards as shown in Appendix B.

8.8.10 Connection to State Streets

- A. An approved permit is required to connect to any existing state system street. NCGS 136-102.6 "Compliance of Subdivision streets with minimum standards of the Board of Transportation Required of Developers" requires that new public streets outside the Town limits and changes to existing streets inside the Town limits that are the responsibility of NCDOT be in accordance with the minimum right-of-way and construction standards established by the Board of Transportation for acceptance on the state highway system. It is the intent of these standards and requirements, as set forth, to complement and not to conflict with the requirements of NCDOT as stated in NCGS 136102.6. In all cases the most restrictive limitation or requirement or the requirement causing the highest standard of improvement shall govern.
- B. All proposed streets shall be constructed in accordance with the minimum Public street standards as shown in Appendix B. All street improvements shall be designed and installed in accordance with Town Standards and the approved Construction Plan. The developer's engineer shall furnish the Town with a certified statement that all street improvements installed in the subdivision meet the minimum standards of the Ordinance.
- C. In addition, street improvements, shall be installed in the following situations:
 - Any existing street segment that has not been accepted for maintenance by either the Town or the NCDOT, and that is to serve as the required frontage for one or more Lots created pursuant to this ordinance, shall be improved and Dedicated to the public, as provided for above, in such a way that the Street segment meets the standards of this ordinance for the particular classification of Street, including right-of-way width. Such street segment shall be directly connected to the existing public street system by way of at least one public street accepted for maintenance by either the Town or

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the NCDOT. No subdivision shall be permitted on any street that is an "island" not connected directly to the public street system.

- Subdivisions that adjoin existing streets maintained by either the Town or NCDOT shall dedicate additional street right-of-way necessary to meet the minimum width requirements for the type of classification of the adjoining street. When any part of the subdivision is on both sides of an existing Street, the entire minimum right-of-way shall be provided. When the subdivision is located on only one side of an existing street, one-half of the minimum right-of-way, measured from the centerline of the existing street, shall be provided. The improvement requirements of this Article shall not apply to the subdivision of lots fronting on established streets that have already been accepted for maintenance by the Town or NCDOT.
- The Planning Board may require pavement and widening or pavement and widening and curb and gutter for turning lanes along any existing or proposed street that forms a significant entrance to a proposed subdivision where in the opinion of the Board such improvements are necessary in order to provide for safe vehicular movement into and out of the proposed Subdivision.
- In cases where a street is stubbed into adjoining property for future extension and such street serves as the frontage for one or more lots which are not corner lots, the Planning Board may require the pavement of a temporary turn-around in a form similar to a cul-de-sac on such street where in their opinion such turn-around is necessary for the public convenience, safety and service. Temporary easements for such purposes may be required.

Section 8.9 Sidewalks

Sidewalks shall be installed within the street right-of-way constructed in accordance with Town Standards as outlined in Appendix B, in the following situations:

- A. In any case where a development adjoins and has legal access to, or will have legal access to, an existing or proposed major or minor Thoroughfare as shown on the Thoroughfare Plan, the developer shall construct a sidewalk along the frontage of such Thoroughfare.
- B. In any case where a development adjoins a street or will adjoin an extension of a street, which has sidewalk on one or both sides within 500 feet of the boundary of the land to be developed, the sidewalk shall be constructed along the adjoining frontage of such street in such a way that the existing sidewalk pattern will be extended.
- C. In any case where a development creates new public streets, the developer shall construct a system of sidewalks on both sides of the street.

Section 8.10 Water and Sewer

8.10.1 Connection to System Required

- A. Any development which has Town water and/or sewer system lines available shall be required to extend the public water and/or sewer system throughout the development to each lot located therein. All

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required line extensions shall include appropriate valves, hydrants, taps, service, manholes, lift stations, pumps, and clean outs to the property line of each lot as required by Town standards.

- B. In any case where a public water and/or sewer system intended to serve more than two (2) lots is proposed to be installed in a development as part of the plan approval process, such system shall be considered to be a required improvement within the context of this Section regardless of whether such a system is an extension of the Town system or not and such system shall be required to be installed by the developer. This requirement includes both facilities within the development and offsite facilities which are essential to providing the service to the property.
- C. Where public sanitary water and sewer are not available as defined below in 8.10.2, structures shall be connected to private water supply and sewage disposal systems (i.e. wells and septic tanks or community systems).

8.10.2 Availability Defined

- A. For developments within or partially within the Town, the term "available", shall mean that there is an existing line of adequate size and flow and/or pressure either crossing the development property or immediately available from an adjacent public right-of-way or the Town indicates its commitment to extend such a line to the property line of the development at no cost to the developer.
- B. For developments located entirely outside the boundaries of the Town but within the jurisdiction of this ordinance, "availability" shall be determined by the threshold levels indicated in the table below. Within the range of lots, water and/or sewer lines shall be within the distance indicated to be considered "available", extension of the water and/or sewer lines shall be paid for by the developer, and the development shall be connected to the system. For example, if the water and sewer lines are within 300 feet of a proposed 15 lot subdivision, then the developer shall pay for the extension and the development shall be connected to the system. If a non-residential subdivision is proposed, comparable demand estimates for residential uses shall be used.

Number of Proposed Lots	Distance to Nearest Line (feet)
0-10	200
11-20	300
21-50	600
51-100	1,000
101 or greater	1,500

8.10.3 Exemption from Extension of Lines

In the event the Town elects not to extend a line of sufficient size, flow and/or pressure, to the development (if in the Town) or within 400 feet of the development boundary (if outside the Town) because of topographic features, legal obstacles, or financial reasons, then, the developer shall not be required to extend water lines to each lot nor provide water and/or sewer service to the development.

8.10.4 Oversized Water and Sewer Facilities

The Town may, in order to serve future development, require the developer to install certain oversized water and sewer improvements and/or to increase such improvements to a size and/or extent beyond that necessary

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for the needs created by the subdivision. In such cases, the Town shall enter into an agreement to reimburse the developer for the oversizing and/or extension based upon rates as agreed to by the Town.

8.10.5 Annexation Required

In any case where a new development connects to the Town water and/or sewer system, such development shall be voluntarily annexed into the Town prior to the approval of a final plat, for a subdivision, or the issuance of a Zoning Permit, where the subdivision of land is not involved.

8.10.6 Installation Requirements

- A. All water and sewer extensions for new development inside or outside the corporate limits will be made by the town's public works department or approved licensed contractors.
- B. No water or sewer line may be connected to the system of the Town unless such line is properly designed and constructed to service the properties intended to be served directly by such line and of a size and design sufficient to accommodate any necessary expansion of the water and sewer system to serve other properties, including fire protection.
- C. The Town shall own and control any and all water and sewer lines and related facilities connected to and serviced by its water or sewer system, except those lines and facilities of other public bodies connected to and serviced by the Town's water or sewer system under contracts approved by the Town Council between the Town and other public bodies.
- D. Because the extension of water or sewer lines to certain properties benefits the owners of such properties by raising property values, the cost of such extension shall be borne by the developers of such properties as provided in this article except in instances when the Town Council makes a determination that the Town is obligated to extend such utilities when it determines that it is the best interest of the Town to do so. In making such a conclusion, it must be demonstrated by the developer to the Town Council that ad valorem taxes to be gained by the Town from the properties which will be served by the proposed utilities will over a five (5) year period exceed the cost incurred by the Town for making such utility extensions.
- E. Additional requirements regarding sizes and installation methods are located in Appendix B.

8.10.7 Extensions Required by State Law and Emergency Situations

To comply with municipal obligations by state statutes, or in cases of emergency where it is found to be in the public interest or necessary to protect the public health, the Town may authorize extensions of water or sanitary sewer into specific areas.

8.10.8 Payment of Tap Fees

Nothing in this article shall exempt an applicant from paying the standard tap fees in effect at the time the application for connection is made as adopted from time to time by the Town Council.

8.10.9 Extensions to Existing Development

Extensions of water or sanitary sewer service within the corporate limits of the town shall be made upon petition as set forth by the Town Council in the Code of Ordinances.

8.10.10 Extensions to New Development

- A. Any person desiring to install any water or sewer line for new developments within the town's service area to be connected to and served by the water and sewer system of the town shall make application on forms provided by the Town, and shall furnish such information or exhibits as are required by such application forms.
- B. Such application for extension, whenever possible, shall be made simultaneously with the appropriate Development Review Process for the type of development proposed as outlined in Chapter 9.
- C. The applicant shall pay to the town a nonrefundable application fee. This fee shall be equal to the annual average water and sewer extension engineering fee, as determined by the board for the July 1 to June 30 fiscal year, plus an additional fee as established by the board from time to time.
- D. The applicant shall submit engineering plans, profiles and specifications for such water main or sewer line, including those for any required fire hydrants, valves, manholes, sewer lift stations, force mains or other sewer lines necessary in connection therewith, to the town engineer for approval by the board of aldermen. All plans shall bear the seal of a registered professional engineer.
- E. No water or sewer line may be installed and connected to the town water or sewer system except as approved by the Town Council. Such approval shall meet the requirements of the Code of Ordinances as adopted by the Town Council.

8.10.11 Denial of Extension

The Town Council will not approve any contract for the installation of any water main or sewer line to be connected to and served by its water or sewer system if in its judgment the projected volume of water that would be used by any properties to be serviced thereby would unduly tax the available water supply or sewage treatment capacity of the town, or it would not be feasible or otherwise suitable for the Town to commit itself to such cost. Exceptions to this policy may be made by the Town Council for any meritorious reason and good cause shown.

Section 8.11 Stormwater Management

8.11.1 Comprehensive Storm Drainage Plan

- A. A comprehensive storm drainage system shall be planned and implemented for each development of greater than 20,000 square feet of impervious area in accordance with the general standards and requirements of this Section. Detail plans where required shall be submitted as part of the Construction Documents.
- B. Storm drainage plans shall be considered on an individual basis depending upon the situation within a given development.
- C. The requirements of the Flood Damage Prevention ordinance shall apply to storm drainage design where applicable.
- D. Post development run-off flow rate shall not exceed predevelopment run-off flow rate. Stormwater volumes shall be detained within the development and released at a rate no greater than existed prior to development and shall meet the design storm requirements below.

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Stormwater System or Component	Design Storm
Open Drainage Channel	25 year
Enclosed System Collectors	10 year
Enclosed System for Street Crossings and Downstream Areas	25 year
Flood Damage Prevention (see Code of Ordinances)	100 year
Detention Facilities	10 year
Detention Emergency Spillway	50 year

8.11.2 Types of Drainage Ways Requiring Treatment

- Those draining one (1) acre of land or more.
- Those carrying storm water runoff from public streets either existing or proposed.
- Those carrying storm water runoff from large impervious surfaces other than streets.

8.11.3 Types of Treatment

- Enclosed subsurface drains
- Open, unimproved channel
- Open, improved channel
- Open channel with flood plain and open space Dedicated to the Town. This option shall not be available except in cases where the Town Board agrees to accept such dedication prior to Final Plat approval.

8.11.4 Easements

- A. Maintenance easements may be required depending upon the size of the drainage way and the maintenance responsibility as determined by the Town.
- B. In any case where maintenance is to be the responsibility of the property owner, the Town may require a right to enter for maintenance purposes where the Town Board determines that the public health, safety, or general welfare constitutes a public necessity for such maintenance.
- C. Where easements are required, they shall be noted on the Final Plat.

8.11.5 Adoption of Standards by Reference

The Town Council hereby finds that hydrologic conditions in Rowan County and Mecklenburg County are similar and that it is in the public interest to maintain a uniform regional procedure for computing the stormwater impacts of new development. Accordingly, the design of stormwater management facilities shall be computed in accordance with the most current version of the *Charlotte-Mecklenburg Storm Water Design Manual* (hereinafter “Stormwater Manual”).

8.11.6 Obstruction of Drainage Channels Prohibited

No fences or structures shall be constructed across an open drainage channel that will reduce or restrict the flow of water. The Zoning Administrator may require any water course or stormwater management facility to be located within dedicated a drainage easement officially recorded at the Rowan County Register of Deeds as a “permanent drainage easement” that provides sufficient width for maintenance.

8.11.7 Grading Standards

The following standards shall be followed in establishing the grading plan for a development:

- A. Developments shall be designed and constructed with a positive drainage flow away from buildings towards approved stormwater management facilities. Plans for drainage facilities shall be approved by the Town Engineer.
- B. In the design of site grading plans, all impervious surfaces in the proposed development (including off street parking) shall be considered.
- C. Site grading and drainage facilities shall protect sinkholes, wetlands, ponds and lakes from increased sediment loading.
- D. Site grading shall not increase runoff flow rate onto downstream properties.
- E. A site shall not be graded to create a slope greater than 2:1 at adjacent properties unless the slope already existed on the undeveloped land. In no case shall the slope be made steeper than it was on the undeveloped land. Terraced or stepped slopes that achieve the overall slope requirement may be considered by the TRC on a case by case basis.
- F. All disturbed areas within the dedicated right-of-way and easements of any subdivision street shall be restored with vegetation and the landscaping standards of Chapter 7 shall be met.
- G. Stormwater facilities to be located in designated open space areas shall be regulated in accordance with Chapter 6 of this Ordinance.

8.11.8 Phase II Stormwater Requirements Reserved.